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APR 27 1937
BUREAU OF PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 10 937

Not for publication without
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REPORT FOR THE PERIOD APRIL 1 to 10, 1937.

HAVRE:

In general the winter of 1936-37 was cold and stormy. Snowfall greatly exceeded the average, and chinook winds were relatively infrequent. However, the winter precipitation as usual did not contribute much reserve soil moisture to farmed land, there being but little improvement in fallow which is now very deficient. Stubble land is more nearly normal, but the moisture in many places has not penetrated beyond the depth of plowing.

Conditions thus far in April have been favorable for working in the experimental field, considerable plowing and other cultivation in preparation for small grains being completed. The first date of planting wheat, oats, barley, and rye was made on April 7, with sufficient surface moisture for germination.

Survival of winter rye is very good, but winter wheat stands appear rather uneven at present. Crested wheatgrass sown last fall with a furrow drill in the new sod rotations is emerging with excellent stands. Older plantings are now green in contrast to other forages.

The calving season at the station is well along. Native grass is becoming green in some places, however, showers and warmer weather are needed to accelerate growth. Weeds along ditches and in parts of the irrigated alfalfa fields were raked and burned. It is yet too early to determine the extent of winter injury, if any, to alfalfa.

Maximum temperature, 71°; minimum, 25°; precipitation, 0.14 inch.

JUDITH BASIN:

The mean temperature for the first 9 days in April was 3° below normal. Precipitation in the form of rain and snow was recorded on 3 days during this period, with a total amount of 0.32 inch.

Surface moisture is quite satisfactory at present, with crested wheatgrass and winter wheat making some start. Winter wheat stands in general are quite uncertain to date, with the late August seedings showing the better condition.

Field work has started with the cultivating and seeding of crested wheatgrass on abandoned land project. With fair weather field work should be quite general next week.

Maximum temperature, 60°; minimum, 15°; precipitation, 0.32 inch.

HUNTLEY:

The first 10 days of April have witnessed warmer weather and a gradual drying off of the soil, permitting the starting of field work on all but the heaviest types of soil. Plowing, disking, and harrowing have been in progress on the Dry Land fields for most of the past week. On most plots the soil moisture extends to a little below the depth of plowing, but in a few instances dry soil was turned up at a depth of 6 inches. Fall-plowed ground which broke up in large, dry clods last September has weathered down to an extremely mellow condition, and seed beds are being prepared without the use of the roller this spring.

Fall-sown wheat, rye, and crested wheatgrass are showing satisfactory stands on most plantings, although the wheat and rye plants look rather weak. Fanweed, Russian thistle and mustards are starting in the farm lands, and range grasses are showing green in the coulees and southern exposures. Cattle and sheep are moving to summer ranges from winter quarters. Much of the high grazing land is still more or less covered with snow, but shortage of local feed has compelled stockmen to take a chance on mountain pastures soon being clear.

Maximum temperature, 68°; minimum, 19°; precipitation, 0.02 inch.

SHERIDAN:

Temperatures continued slightly below the average over the first 5 days of the month, but have since been slightly above, with the last 2 days quite definitely warmer. The only precipitation consisted of the last of the storm of March 31 with several traces since.

The only field work possible over the period was duckfooting and seeding to oats of a sandy piece of ground north of the ravine, and the clearing of a part of Field H of Russian thistles. With fair weather over the week end it appears probable that tillage of other fields may be possible at the beginning of next week.

Winter wheat has greened noticeably, and it now appears probable that only some sandy places exposed to blowing have winterkilled completely. Winter rye, crested wheatgrass, and native grass have made a good start. Alfalfa shows some green in places, but bromegrass appears to have started growth only in the most favorable locations.

Soil samples taken at random this morning showed moisture present to a depth of from 28 to 36 inches, on land cropped last year, and where the surface had dried the most.

Maximum temperature, 60°; minimum, 23°; precipitation, 0.07 inch.

DICKINSON:

Snow which fell April 1 and 2 amounted to 0.48 inch precipitation. This was wet and drifted less than previous snows during the winter. Moderate temperatures during the last of the week have melted all of this except a few drifts. Most of the water went into the soil, but there was some frost in the ground, and on roadways and bare pasture land some run-off occurred. The soil is wet 4 to 5 inches on bare pasture land and 6 inches or deeper on stubble land. A good seed bed can be prepared as quickly as the wet spots dry on the surface. Field work will begin early next week, unless there is more precipitation.

Winter wheat and rye are greening some, but stands are still uncertain. Some of the early seeded rye, which germinated after light rains in August, was killed by drying out.

Grasses are backward. The soil was so extremely dry during the fall that a normal late fall growth was impossible. Crested wheatgrass is alive but lacks its characteristic early spring vigor at this time. Seedings made in 1935 are greening more than older stands. All seedings made in the spring of 1936 will have to be replanted. Late fall seedings have not yet emerged.

Maximum temperature, 52°; minimum, 10°; precipitation, 0.48 inch.

MANDAN:

Agronomy - Snow on April 2 and 3 amounting to over a foot delayed all field work. The snow melted slowly, and practically all of it went into the ground. No field work has been done to date, but if conditions remain favorable, it should be possible next week. Maximum temperature, 56°; minimum, 12°; precipitation, 0.86 inch.

Horticulture - Late snows have delayed the starting of field work, but planting will probably start next week. The melting snow has increased the moisture content of the soil. The usual fruit breeding work was carried on in the greenhouse. The hot dry weather of last summer damaged many of the potted trees, and the set of fruit is light.

Vegetable work was started on March 15 with the following vegetables planted in the greenhouse: tomatoes, pepper, eggplant, cabbage, cauliflower, and celery. All are nicely under way, most of them transplanted. Flowers for the various ornamental plantings on the station grounds, including cannas, geraniums, coleus, etc., are doing very well. A number of varieties of hardy perennials for testing in the open were planted in February, and are coming along nicely. No field work with vegetables has as yet started but should be under way next week. There now seems to be enough moisture to do a good job of plowing, which was deferred last fall due to the dryness of the soil.

Arboriculture - Siberian pea-tree, green ash, Russian-olive, and honey locust seed has been seeded in nursery fields. Sufficient surface moisture is present to work the soil down to a good tilth and assure germination. Some of the seed had heated somewhat during stratification. Chokecherry seed planted in 1936 is now germinating, which indicates it may be possible to carry this seed over one year in dry condition. This seed was in dry soil from the time of planting until March of this year.

J. M. Stephens returned to the station the evening of March 31.

BELLE FOURCHE: (Report for the month of March, 1937.)

The first 3 weeks of March were dry and relatively warm, but 14.5 inches of snow, measuring 1.37 inches precipitation, were received March 23 and 24. Some drifting occurred, but 7 to 11 inches of snow were retained on the more exposed areas. The snow melted slowly, about 4 inches remaining on the ground at the close of the month, and practically all the moisture was absorbed by the soil. Abnormally cold weather prevailed following the snow, and subzero temperatures were recorded on 4 successive days, commencing March 24. The mean temperature for the month was 29°, which is 2° below the average mean for March.

The ground froze every night, except two, and plant growth was negligible. Crop prospects have greatly improved since the heavy snow, but owing to the shortage of feed and the generally poor condition of cattle and sheep, the lateness of the season is unfavorable to livestock.

Maximum temperature, 74°; minimum, -16°; precipitation, 1.50 inches.

BELLE FOURCHE:

Cold, damp, unsettled weather prevailed most of the period, but the last two days were clear and comparatively warm. Approximately 2 inches of snow were received April 1 and 2, but the snow was of little value, as it was drifted badly by a strong wind on April 2. The first rain of the season occurred April 5, when 0.05 inch precipitation was recorded. The snow remaining on the ground from the heavy storm of the previous month melted very slowly, and did not completely disappear from cultivated fields until April 8. A strong, warm wind on April 10 caused rapid drying of the soil, and field work probably can be commenced April 12.

The cold weather retarded plant growth, but crested wheatgrass and bluegrass have resumed growth, and native grasses are beginning to show signs of life. Winter grains and fall seeded grasses are emerging, but very slowly and unevenly.

Maximum temperature, 54°; minimum, 10°; precipitation, 0.29 inch.

ARCHER:

During the first ten days of April the weather was cold and cloudy with some rain and snow. Due to the absence of heavy winds the snow covered the ground and at present small drifts are quite numerous. The precipitation for April, to date, is 0.47 inch. The greater part of this occurred during the night of April 6. The soil in the corn and stubble fields is moist to a depth of about 21 inches. The prairie soil is moist to a depth of about 14 inches, but the soil of the slopes which have had the advantage of snowdrifts is moist to a greater depth.

Winter rye is making a good start, but the winter wheat at the station is in a questionable condition. Small tufts of early grasses are showing on the prairie, and weeds are emerging.

Plowing was started on the rotation plots April 6. The stubble land was rather wet, but the corn ground was in a good condition for working. The soil on some of the corn plots was moist to a depth of only about 6 inches. The snow that fell during the night of April 6 will improve this condition.

L. B. McWethy and Miss Edith Raleigh of the Resettlement Administration and W. L. Quayle of the University of Wyoming were station visitors April 8.

Maximum temperature, 62°; minimum, 19°; precipitation, 0.47 inch.

NORTH PLATTE:

The weather for the week ending April 10 was mostly fair. There were high winds on Wednesday with considerable dust in the air. Rains were reported over the eastern half of the State, but no precipitation was recorded at the station.

Additional D. L. A. field plots of winter wheat have been reseeded to spring wheat, and it will probably be necessary to reseed several more after the wheat has emerged so that the percentage of stand can be determined. The lack of moisture below the first foot on the cropped fields has discouraged many farmers from seeding spring grains. The oats and barley varieties were seeded on April 2. Dr. Quisenberry visited the station on April 1 and directed the seeding of the oats and barley nursery. Experimental work with the basin lister is being continued this year. A field has been laid out with varying slopes; and disking, blank listing, and blank basin listing have been done

in preparation for the test. Before corn planting time, these lister ridges will be leveled and seeding will be done by the two methods.

The Experiment Station was host to 350 Smith-Hughes boys from the western half of the State Wednesday, Thursday, and Friday. The days were spent in judging livestock, poultry, and grain.

Maximum temperature, 64°; minimum, 18°; precipitation, trace.

AKRON:

Weather cleared by last week end, and teams have been busy on the station all this week preparing for and seeding the early spring planted small grains. All variety tests and all rotation plots have been seeded by this week end. The seeding was done in nicely moist ground on all soil preparations, and uniform emergence should take place. Considerable farm seeding remains to be done in this section, and a part of this must be a little late for best results. Considerable seeding was accomplished during the fore part of March, but inclement weather interfered before the intended acreage could be planted. Weather did not again clear for field work until the first days of April. This means that a part of this delayed seeding must necessarily go in late, or else there must be a curtailment of the expected acreage in these crops. It is estimated that three-fourths of the seeding has been accomplished by this week end.

Volunteer winter wheat is a problem on stubble land here on the station, and will enforce early working, which will be done just as soon as the early spring seeding has been completed. Seeded winter wheat has come through the winter very satisfactorily, and with from 18 inches to 6 feet of soil moisture on stubble and fallow, respectively, it now faces the current growing season. There was possibly a maximum of 15 percent winter killing on the worst stubbled-in plots. Other work was the seeding of the early spring planted crops in the nursery, and the trimming of the alleyways in the winter wheat section of the same project.

K. S. Quisenberry took notes on winter wheat survival, particularly that in the nursery experiment, last Friday. R. T. Burdick, Associate in Rural Economics for the State Agricultural College, visited Friday.

This station is about 20 percent below normal precipitation for the current year to April 1.

Maximum temperature, 70°; minimum, 30°; precipitation, trace.

COLBY:

The first ten days of April have averaged rather unsettled, cold, windy, and cloudy with very little precipitation. On five days there was more or less of rather severe soil blowing on bare fields. Heavy frost covered the ground on two mornings.

Winter wheat is greening up steadily but not making rapid growth. On fields that were planted before the middle of September and which did not blow the prospects are very promising. Where seeding was delayed waiting for rain, which did not come until the latter part of September, the wheat has not generally made sufficient growth to protect itself against blowing, and in many cases it was so small during the winter that it became covered by a thin layer of loose soil, which gravitated into the drill furrows from the sides of the drill ridges, through which it has not been able to emerge again. Such wheat does

not show very promising, either because of poor stand or because of shipping by blowing soil, or both. The wheat on the station was not seeded until October 8, on account of a dry seed bed. A good stand was secured in the fall, but there was not much growth in the fall and winter. Now the growth is scant and the stand thin. This is true to about the same extent on all the plots, even those which have 6 feet of moisture. Unfortunately this year we do not have any wheat on the station seeded earlier.

The spring small grains which were seeded March 12 are just beginning to come through. On some of the plots thistles are up, getting a start over the deeper planted crops.

Maximum temperature, 75°; minimum, 19°; precipitation, 0.06 inch.

HAYS:

Although some of the night temperatures dropped below the freezing point, the weather generally was favorable for wheat, which made a good growth and now covers about half the ground. The growth is much the same on all plots, except for being very slightly heavier on the fallowed plots, and slightly lighter in sorghum stalks where it is beginning to lag, slightly, in and next to the sorghum rows. The most marked difference in the growth is on the plot that received a top dressing of straw last winter. On this plot the stand is thinner and the growth is markedly depressed, but the color is about normal.

Barley is up to a good stand. Oats, spring wheat, and peas are coming but are not yet up to a good stand.

Maximum temperature, 64°; minimum, 18°; precipitation, 0.18 inch.

GARDEN CITY:

Four days out of ten have been dusty, but none were severe. One might have developed into a very bad storm, but it was stopped by an 0.08 inch rain. The wheat has made good recovery from the injury received from the dust storms on March 23 and 24, especially that which is on fallow, but all of it is in need of moisture.

Lamb Feeders' Day was held April 10, bringing stockmen from the surrounding country and a few from out of the State. The feeding tests were conducted on various sorghums, to determine their comparative feeding values. The results from these tests in the past four years show that lambs can be fed sorghums at a good profit. This method of feeding is fairly new in this territory and offers a profitable means of marketing the sorghum crops grown here.

Field work consisted of seeding barley, oats, and spring wheat. Several varieties of shrubs were planted on a terraced slope.

Maximum temperature, 78°; minimum, 21°; precipitation, 0.08 inch; maximum wind velocity, 18.8 miles per hour.

TUCUMCARI:

Average wind velocity has been high in this locality, although there have been some very calm days. Extremely high winds from the north blew on two days, bringing in much "blue dust" as well as moving a great amount of local soil. Amarillo reported velocity as high as 70 miles per hour. Most of the station crop acreage has been

blank listed, and soil movement was not extensive. Wheat has made sufficient growth so damage was not severe.

Farmers have listed extensively, moisture conditions enabling work to progress rapidly. Precipitation to date since January 1 totals 1.66 inches, or practically normal. Grass is starting growth, but is being retarded by cold weather.

Numerous severe frosts late in March damaged fruit buds and blooms less than anticipated. Fruit prospects are still quite promising, with the majority of trees heavily loaded with blooms. Chinese elm show a heavy seed crop where somewhat protected, but seeds are far from mature.

Maximum temperature, 76°; minimum, 30°; precipitation, 0.29 inch.

DALHART:

A continuation of the intermittent high winds and of the drought is all but encouraging. Two days of severe soil blowing occurred, and on three other days soil movement was bad. The surface soil is best described as a shifting layer of structureless sand. Erosion of the surface soil on the station has been held to a minimum, but the mulch accumulation of blow sand, while not bad, is disheartening and disgusting. Plot land is in relatively good condition, the greatest deposit being on variety fields. Fields adjacent to the station are largely covered with shifting and eroding sands. Damage in the region from soil blowing is not so severe as for 1933, 1934, and 1935. The potentialities for damage are greater than existed during each of these years, however. With no subsoil moisture and with only sufficient moisture in the surface soil to show dampness, the future appears dismal.

Maximum temperature, 76°; minimum, 26°; precipitation, 0.02 inch; evaporation readings greatly in error because of sand blowing into the tank; maximum 24-hour average wind velocity was 21.0 miles per hour.

BIG SPRING:

Since April 1 a wide variation in weather conditions has prevailed. On the 4th a norther blew up which was immediately followed by hail, snow, and rain, the combination of which netted 0.54 inch precipitation. On April 7 a severe sandstorm occurred, which leveled many fields where preventive measures had not been taken. Station fields were kept well under control, except where the sand blew in from neighboring farms.

Spring plowing and listing of plots was completed during the week. One increase field to be planted to Sumac was also relisted. Other work has consisted mainly of sand furrowing and hoeing weeds.

Some farmers have started to plant early feed and some cotton, but the soil is so cold that poor stands probably will be obtained even though the crop is not covered up with sand. Winter wheat throughout this area is looking very promising at this writing. These wheat fields have furnished an abundance of grazing through the winter months, and now with timely rains during the next two months, good yields could be obtained.

Maximum temperature, 86°; minimum, 32°; precipitation, 0.54 inch.

LAWTON:

April 1 to 10 was generally cold and windy. Minimum temperatures of 31° were recorded on the 4th and 8th. Precipitation on the 3rd and 4th amounted to 0.35 inch. On the 7th the wind velocity for the 24-hour period was 21.2 miles per hour, and a greater part of the entire wind movement was recorded within a period of 18 hours. The sky was filled with dust from the south in the afternoon. About 6:00 pm the wind changed to the north with greatly increased velocity, but the atmosphere was much clearer.

Good stands of sweetclover and alfalfa were obtained on the rotation plots seeded March 12. Corn seeded on the same date has not emerged yet, and satisfactory stands appear questionable. The same condition exists on surrounding farms where early plantings were made.

Growth of small grains continues to be very satisfactory. Green bug infestations, as reported April 1, now seem to be entirely controlled by parasites.

Cold weather continues to retard the growth of native grass and alfalfa.

WOODWARD:

A rain is on everyone's minds in this section of the country--a rain to carry along the best prospective wheat crop in the past five years. But so far this month there has been only 0.04 inch. While winds have not been high over the past ten days, the surface of the soil is very dusty and moves in a light wind. There has been a great deal of soil sifting along the surface.

As is the rule here, farmers are blank listing for row crops. They will split the ridges and plant in late May and early June.

There seem to be many peaches still uninjured, despite recurring low temperatures. There is always concern over the fruit crop, out of all proportion to the amount of fruit in the country.

The Japanese qunice has been blooming for some time, as have the forsythia, and Thunberg's and arguta spireas. The bloom on these has been ragged and partial. Golden currant is in full bloom and very fragrant. Dainty grape hyacinths make a pretty show, and narcissus give bright flaunting color. The fragrant honeysuckle has continued in bloom much longer than usual this spring.

Planting trees and cultivating orchard, vineyard, and windbreaks has comprised most of the station work during the past ten days.

Maximum temperature, 84°; minimum, 23°; precipitation, 0.04 inch.

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WEEKLY STATION REPORTS

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APR 17 1937

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REPORT FOR THE WEEK ENDING APRIL 17, 1937.

HAVRE:

The weather during the past week was dry, mild, and windy. Precipitation thus far in April approximates 40 percent of the average, with a mean temperature about 3° above normal. Wind velocities were quite high on several days, a high dust haze being in evidence. However, soil movement in this locality was unimportant.

Experimental field work continued without interruption, seed bed preparations for small grains being completed. Plowing for flax and other crops is now in progress. Early sown cereals have germinated well but are not yet emerged. Crested wheatgrass continued to make good progress but will need moisture before long. Alfalfa has barely started growth. Some winter wheat plots now appear to have survived with fair stands.

A 22-acre farm field of spring rye for hay has been planted and also some increase seed plots of Markton oats and Prolific rye. Several acres of bottom land cleaned off by the W. P. A. crew were plowed in preparation for a grain hay crop.

Calving in the station herd is roughly 75 percent completed. Native grass made some growth in locations favored with moisture, but slopes and hill tops apparently will require rain for starting. Unless seasonal precipitation is above average, a shortage of irrigation water might occur again.

Maximum temperature, 71°; minimum, 32°; precipitation, 0.03 inch.

HUNTLEY:

Weather and soil conditions have favored the advancement of field work during the week, with the result that tillage operations for all early crops have been completed on the Dry Land fields. Seeding of all crops but corn has been completed in the rotations experiments, and much of the planting in the miscellaneous field has been done. Winter wheat and rye have improved in condition as a result of a few warm days, but they are still much below normal in appearance. A soaking rain or wet snow is needed to build up a little moisture reserve against the time when these crops will start rapid growth. Seed beds for spring sown grains apparently have sufficient moisture for germination, but there is no reserve for later growth.

Alfalfa, crested wheatgrass, and range grasses have made good growth in the last few days. Downy bromegrass makes the rangelands back of the station look very green. Stockmen are continuing to move flocks and herds past the station to the summer range. Warm days recently have melted much of the snow in the foothills, and grass should be starting well.

Maximum temperature, 77°; minimum, 31°; precipitation, 0.19 inch.

SHERIDAN:

Although somewhat above the average for the season, temperatures were fairly moderate until the 15th with maximum temperatures below 70°. On the 15th the maximum temperature was the highest yet recorded on the station for the first half of April, but this was followed during the night by rain and snow, and cooler weather since. The precipitation, although light, was of immense benefit on account of the heavy crust that had formed over fall sown crops that had not yet emerged. The crust was softened and has not yet hardened again.

Light rain and snow prevented any field work until the afternoon of the 12th, when work was begun on some of the lighter soil. Field work has been general since, although the plots in the rotation field still remain too soft for even surface cultivation. Land prepared and sown during the week included the early date of seeding and rates of seeding spring grain, sweetclover varieties and methods, perennial grasses and alfalfa, varieties of spring grain, about 20 acres of grain for feed or seed, the reseeding of some bromegrass, and early annual crops for pasture.

More killing now shows with winter wheat than was apparent last week. On fallow, which was rather uneven in the rotations, most high spots were killed, leaving a good stand only in the depressions. However, in the varieties of winter wheat, where the fallow was worked more and leveled down better, the killing was just as great if not greater. On other plots and in the bulk field the stand is fairly even, excepting on the sandy knolls, as mentioned last week.

Crested wheatgrass has emerged with a fair stand on most of the seedings of the last of October, although the stand on some plots cannot yet be fully ascertained. Alfalfa was sown broadcast during the week on the most of these seedings.

Much of the older seedings of alfalfa appear now to have killed out almost completely, although they started some growth after moisture was received last fall. Killing sufficient to thin the stand some apparently has taken place with the most of the remainder of that crop. Crested wheatgrass and native grass made a good growth during the week, but bromegrass appears to be very slow in starting.

Maximum temperature, 82°; minimum, 32°; precipitation, 0.48 inch.

DICKINSON:

Strong winds dried out the surface moisture rapidly. Showers threatened on three days but little rain fell. The persistent winds with dusty areas about the landscape and clouds which bring no rain make the outlook too much like a dry season.

Early tillage in preparation for seeding small grains was completed. Wheat and barley were seeded on the main field on April 17. All other plots on the rotations are ready for seeding. The surface has dried so much that it seems probable that some of the grains will not germinate until after rains. Crested wheatgrass made rapid growth and is now providing pasturage where moisture is available for growth. Pasture lands, where closely grazed so that most of the snow blew away, are in very poor condition and provide no feed.

Seeding of wheat on farms in the district proceeded rapidly, much of the grain being drilled in without cultivation or only with disking ahead of the drill. Very little land is being plowed before seeding. The acreage of wheat in the district will be the smallest in several years, because of the shortage of seed and funds and lack of moisture in the seedbed.

Visitors during the week included William Leary, extension agronomist, North Dakota Agricultural College; and Ernest J. George, and B. Ira Judd, Mandan.

Maximum temperature, 78°; minimum, 28°; precipitation, 0.07 inch.

MANDAN:

Agronomy - The first field work on plots was plowing in the main field on the 12th. Thistles were raked and burned from plots and blocks being prepared for spring seeding. Such preparations as plowing, duckfooting, harrowing, and stake setting have been completed for spring grains. Seeding of wheat, oats, and barley in rotations will start on April 19, which is very close to the average date of seeding for wheat.

Seedbed conditions are very good, though high winds have drifted a considerable amount of soil on plots that had thistles to hold it. In places the soil drifts on plots are as deep as 12 inches. On the 12th the wind velocity from 8 am to 1:30 pm average 26 miles per hour. On the 14th high wind again prevailed most of the day, carrying much soil in the air.

The first observation of moisture penetration into the soil showed the soil wet from 7 to 12 inches depending somewhat on the amount of cover. Some samples taken in the region of a snow fence on prairie ground showed the soil wet from 1 to 4 feet, depending on the distance from the fence.

Maximum temperature, 69°; minimum, 32°; precipitation, trace.

Horticulture - Planting of seeds, cuttings, and nursery stock has been in progress during the week. The top soil has a fair amount of moisture due to the melting of late spring snows. High winds have at times made planting operations difficult.

Transplanting of vegetables has been in progress in the greenhouse and hotbeds during the week. No seeding of vegetables in the field has been done as yet, due to prevailing high winds. The soil so far, seems to be in favorable condition as to soil moisture and consistency. Mulch has been removed from beds and borders where a considerable number of tulip varieties were planted last fall. As the tulips are making an appearance they evidently wintered alright.

Arboriculture - The planting of tree seed in the nursery was completed during the week. All bare land and hedges and part of the nursery fields have been cultivated.

ARCHER:

During the past week the weather was rather mild with considerable wind. The week ended with a light, wet snow. On April 14 the wind was sufficiently strong to cause soil blowing.

Plant growth progressed satisfactorily. At the station the winter rye on fallow is green but the winter wheat is practically nil. All plots and increase fields of winter wheat will be tilled and reseeded to spring wheat. Trees and shrubs are showing the first signs of spring. A thick growth of Russian thistles is everywhere present.

Work at the station consisted of seeding the varieties of small cereals, one-waying the dairy field, and hauling manure. Most of the rotation plots were plowed, and the duckfooting of these plots is under way.

W. L. Quayle visited the station April 14.

Maximum temperature, 76°; minimum, 26°; precipitation, 0.17 inch.

NORTH PLATTE:

High winds during the week resulted in severe soil blowing. Wind velocities of 40 to 45 miles per hour were attained at times on the 12th. A light shower fell during the evening of the 11th clearing the air of dust, but the moisture was of little value for plant growth. If there is to be a normal amount of precipitation during April, it will be necessary to get over 2 inches within the next two weeks.

Most of the winter wheat plots have been reseeded either to spring wheat or barley. The only winter wheat plots left are those which were stubbled in or in protected plots. Soil blowing made it necessary to reseed some of the plots to check the blowing. The roadways were duckfooted to roughen the surface. The winter wheat nursery and varietal plots are considered as failures and have been duckfooted to prevent excessive blowing.

The potatoes were planted in the field and irrigated varietal plots. The early seedings of spring wheat, oats, and barley have emerged. Pastures are greening up, and stockmen are turning their livestock on pasture early because of the high cost of feed.

Mr. Marston of the Office of Experiment Stations visited the station during the week.

Maximum temperature, 77°; minimum, 34°; precipitation, 0.16 inch.

AKRON:

The week was characterized by dusty weather on at least three of the days. On Wednesday there was one of those hard northwest winds that showed considerable soil in this vicinity still in excellent condition to blow. It abated by noon, and only the most susceptible soils continued to dust during the afternoon. Teams were in the field correcting the surface condition of some of the station soils. Reports from farmers indicate this wind very damaging to some of the winter wheat over the county.

There has been nothing but trace precipitations thus far in April. Today is cloudy with occasional showers of snow and mist. There has been not more than a trace by noon.

Winter wheat has made rapid growth during the week, and the plots are now showy from a distance. Spring grains seeded in March are emerged, but those seeded on the rotation plots early in April are only beginning to show emergence.

Field work was largely the lining and trimming of roadways where they bordered winter wheat. Some disking of stubble land to kill or weaken volunteer winter wheat was accomplished. Plowing of the stubble land for the rate and spacing corn experiment was started yesterday.

Shrubbery about the building foundations is just breaking the buds. A curlew was heard overhead yesterday and again today. Migratory birds have not yet appeared in any great numbers.

Wayne Austin of the Soil Conservation Service inspected grass nursery seedings early in the week. L. V. Toyne, county extension agent of Weld County was here yesterday for foundation seeds.

Maximum temperature, 83°; minimum, 30°; precipitation, trace.

COLBY:

This week was characterized by high temperatures, which were favorable to crop growth, and high winds, which were unfavorable, drying out the soil and causing very serious soil blowing, which has ruined much wheat that was making rather excellent growth. On the afternoon of the 11th a hard south wind, and during the night and the following forenoon an even harder wind from the northwest, caused the worst siege of soil blowing of the year. Almost every day since there have been short periods when more or less soil blowing has taken place. Practically every farmer has and is taking some means of saving his wheat from this menace. Spring tooth harrows, shovel tools of various kinds, chisels, and listers are seen wherever blowing has started.

There are many good fields in this county, however, which have not blown at all. These are making excellent progress now. Some good fields are being damaged along the edges by soil blowing in from adjoining fields. The wheat on the station is making some growth and looks more promising than a week ago. Some of the plots started blowing Monday. These were gone over with a duckfoot machine, using 2-inch shovels 40 inches apart.

The spring small grains came up during the fore part of the week. The stands are excellent, and they are making faster growth than the winter wheat.

Maximum temperature, 80°; minimum, 33°; precipitation, none.

HAYS:

Favorable growing conditions have prevailed throughout the week. Although most of yesterday the sun was dimmed with dust that filled the air, and today the air still carries considerable dust, neither yesterday nor today has there been more than a light breeze, and no dust was raised from the soil in this locality.

Winter wheat has made a rapid growth during the week. It is beginning to make an upright growth, although it can hardly be said to be jointing as yet. The soil is not completely covered, but from the road the wheat almost hides the ground. The past two days it begins to show a tendency to wilting, indicating some lack of moisture. However, the wheat is not actually suffering. If dry weather continues it may suffer a check in growth, which probably would be beneficial inasmuch as there is little or no reserve moisture to carry to harvest a heavy growth that would be produced by too favorable conditions at this time.

Barley, oats, spring wheat, and peas are up to a good stand. Weeds are extremely thick on all ground that has not been spring-tilled. There are no weeds in the winter wheat, but as usual they are numerous in the small spring grain plots.

During the week spring plowing and blank listing for row crops has been done. Most of the work of trimming winter wheat plots has been finished.

Maximum temperature, 82°; minimum, 33°; precipitation, none.

GARDEN CITY:

No precipitation has fallen this week, and four days out of the seven have been dusty. Temperatures have increased considerably, and the wheat has made good growth, considering the conditions. Field work consisted of early spring plowing and listing. Dust was raked from the lawn and hauled away. The average depth of the dust on the lawn was probably at least an inch.

Maximum temperature, 90°; minimum, 35°; precipitation, none.

TUCUMCARI:

Temperatures were unusually high the past week, wind movement was low with the exception of one day, and no precipitation was received. The maximum temperature, 92°, has been exceeded in only one April since 1905. The minimum for the week, 40°, is also unusually high.

Listing is continuing over this locality. Listed fields have not blown to any extent, but where row-crop land has not been listed the damage has been severe. General conditions, prospects for a wheat crop and moisture in row-crop land, are no doubt better than at any time since 1931. This does not hold true for ranges, for they have not fully recovered from the adverse conditions which were most severe in 1934.

Range grass is starting, and trees are turning green rapidly, but rain would materially aid in the development of all vegetation. Early peaches and some Compass cherries were killed by hard frosts in late March. Late peaches, and apples, cherries, pears, and all except the Hanska variety of the Hanson hybrids appear to be uninjured.

During the week trees were watered; a number of pine and junipers were moved from the nursery to permanent locations; some 200 sand plums (Prunus watsoni) were dug from the Nara Visa neighborhood and planted on the station; lawns and hedges were raked and cleaned; and the balance of all station increase land was listed.

Precipitation, none; precipitation since January 1, 1.66 inches.

DALHART:

General conditions remain unchanged from the previous report. Dust was in the air every day, and soil blowing was severe on Friday. Field work is still impossible. Chinese elm trees and lilacs are leaving out. Flowering currants, peaches, and plums have bloomed during the week. Grass is beginning to send tiny green leaves through the sand.

Maximum temperature during the week was 92° on Friday. This ties the previous high for April, which was made in 1910; minimum, 35°; precipitation, none. Total precipitation for the year, 0.71 inch. The precipitation since July 1, 1936, is 4.16 inches, which is the lowest received for this period and is approximately 7 inches below normal for the period.

BIG SPRING:

Unusually hot weather was experienced during the last half of this week. The maximum during the last three days ranged from 90° to 94°, which is quite a contrast to that of the previous week. Many farmers will start planting feed and cotton if this warm weather continues, although the soil is still cold. With the moisture available, they should obtain fair stands, other conditions being favorable.

The April 15 date of planting of cotton was made as scheduled, with soil and moisture conditions such that fair stands should be obtained. As a rule, however, these early plantings are either destroyed or injured by some of the elements. Wheat plots were trimmed and the alleys were cultivated during the week. Other work has consisted of listing plots, working down winter listed plots, and disking up wheat turf in the orchard and evergreen planting.

D. L. Jones and R. W. Randolph of the Lubbock station were visitors April 16.

Maximum temperature, 94°; minimum, 50°; precipitation, none.

LAWTON:

Small grains responded with a very rapid growth to the past week of warm weather, when maximum temperatures ranged from 80° to 93°. The wind velocity averaged a little more than 10 miles per hour on 4 days, and soil moisture is being rapidly depleted. Since March 7, precipitation in the form of scattered showers has amounted to 0.80 inch.

Several of the wheat varieties and wheat on the rotation fallow plots measure about 25 to 28 inches high. Early Blackhull is fully booted. The first heads are breaking out of the boot in winter barley on rotation 196. Three selections of winter oats, Coker 32-1, 33-19, and 33-47, began heading April 13 to 16. Volunteer oats on surrounding farms are heading and the plants are quite short.

Where a rank growth exists, wheat, barley, and winter oats are beginning to show the need of additional moisture.

Corn on the rotation plots was replanted April 12. Very poor stands were secured on surrounding farms, some replanting has been done, and in some instances the fields will be planted to cotton or sorghums.

The sorghum variety test, including 20 varieties, was planted in quadruplicate plots April 16. The surface moisture was questionable, and emergence may be very uneven if rain is not received in the near future.

Spring plowing of the rotation plots was completed April 14. Plots to be fallowed this year will have to be plowed in the near future because of extensive weed growth.

Professors H. F. Murphy and L. L. Ligon, A. & M. College, Stillwater, visited the station April 10.

WOODWARD:

Over the past month conditions have made for an extremely lush, leafy growth of wheat. Over the past week rather high winds and high temperatures have made such wheat show signs of suffering for moisture. In many cases there is yellowing and burning. A good rain within the next few days is all that will save the wheat crop in general from extreme damage.

Wheat on fallow on the station is as yet in good shape, as is much of it on early prepared ground.

Soil drifting on fields not covered with wheat continues to be bad, filling in lister furrows and generally interfering with preparation for spring crops.

On the station redbud, flowering peach, flowering crab, spireas, lilacs, narcissus, tulips, Japan quince, and many other plants are all coming into bloom at once, making a delightful scene.

PENDLETON: (Report for the period April 1 to 10, 1937.)

Ideal spring weather prevailed during the first ten days of April, with moderate temperatures and frequent showers combining to make this a very favorable spring season. On the station all the spring sown small grains have emerged with good stands. Alfalfa, sweetclover, and peas have not emerged as yet. A few farmers are still seeding their spring wheat, although it is getting rather late for this area. The seeding of canning peas has been delayed due to frequent showers in the higher areas. Very little plowing for fallow has been done on account of the wet surface soil. In most years many farmers are through plowing for fallow by April 15. The frequent showers have been ideal for the spring sown grasses, insuring good stands. About 25,000 acres of crested wheatgrass has been planted in Oregon during the 1936-37 season.

Visitor: Chancellor Hunter of the Oregon State System of Higher Education on April 5.

Maximum temperature, 64°; minimum, 30°; precipitation, 1.63 inches; normal precipitation for April, 1.28 inches.

PENDLETON:

A measurable amount of precipitation occurred on six days during the week, totaling 1.00 inch, with 0.63 the greatest amount in a 24-hour period. The normal for April is 1.28 inches, to date we have received 2.63 inches. The rains have delayed the seeding of canning peas and plowing for fallow. The delay in plowing for fallow will be a factor in reducing costs, as at least one fallow operation will be eliminated. During the first part of April about 500,000 bushels of wheat was contracted by farmers on the basis of $1.03 per bushel, #1 bulk. Spring wheat is growing rapidly and there will be only a few days difference between harvest dates of winter and spring wheat. In most areas of the Columbia Basin the fall sown wheat is rather backward and condition is not as good as the spring wheat.

Visitors: F. A. Cuthbert, Associate Landscape Architect, University of Oregon; and Virgil B. Hawk, in charge of Outlying Grass Nurseries, S. C. S., Pullman, Washington.

Maximum temperature, 74°; minimum, 30°; precipitation, 1.00 inch.

JUDITH BASIN:

The mean temperature for the week ending April 17th, was 5° above the normal for April.

With only a trace of precipitation recorded on the 13th and 16th, and the wind velocity exceeding the April average by nearly 2 miles per hour, the surface is showing need of moisture.

Winter wheat at the station shows quite a variation in condition, ranging from good to very poor stands. In general a large acreage of winter wheat on fallow will need to be reseeded.

Due to freezing at night, grasses have only made a moderate growth, and pasture tests will not start until next week.

The early spring date of seeding crested wheatgrass on abandoned land and date and method of seeding have been completed. Dry Land Rotations are being tilled for next week's seeding.

Maximum temperature, 66°; minimum, 23°; precipitation, trace.

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REPORT FOR THE WEEK ENDING APRIL 24, 1937.

HAVRE:

Dry, windy weather prevailed, with very little precipitation. Temperatures were somewhat cooler towards the close of the week, with a minimum of 25° Saturday morning. Wind movement was especially strong on two days, the 24-hour average for April 21 being 20.3 miles per hour, soil drifting occurring in numerous fields. These conditions caused rapid surface drying, and conditions are becoming none too favorable for germination. Early sown small grains have emerged with uniform stands.

Work in the experimental field consisted of plowing, disking, and spring toothing various plots in preparation for the general seeding program to begin early next week. The grain-hay projects have been planted.

Native grass continues to make rather slow growth, and would be benefitted greatly by showers.

Maximum temperature, 65°; minimum, 25°; precipitation, 0.01 inch.

HUNTLEY:

Cooler weather with light precipitation in the form of snow and sprinkles of rain has freshened winter wheat and rye which had begun to show the effects of drying winds. The moisture received was not sufficient to increase the small reserve in the soil to any measurable degree.

Field work progressed steadily throughout the week with seeding as the major activity. Plowing land for corn was begun yesterday. With few exceptions, all stubble plots being plowed show moisture to the depth of tillage, but weed growth and other moisture depleting agencies have dried the surface few inches to some extent.

Old stands of alfalfa appear to have withstood the dry season and grasshopper injury of 1936 together with the past severe winter with little damage, and the crop is now making a good start. Seedings made last year have been disked up because of very poor survival. Crested wheatgrass would now supply abundant pasturage.

Maximum temperature, 68°; minimum, 24°; precipitation 0.26 inch.

SHERIDAN:

Temperatures over the week were just about average for the season, with considerable cloudiness and wind and several light showers and snow flurries, but with no precipitation sufficient to delay field work for more than a few hours.

Fall plowing, fallow, and stubbled plots in the rotations, and the remainder of the early seedings outside the rotations were sown, including wheat, oats, barley, peas, alfalfa, crested wheatgrass, and sweetclover. Brunker oats sown the 8th emerged during the week.

An attempt was made to plow in the rotations on the 22nd, but the soil turned up too sticky to work down well on the plots normally plowing the best, and it was abandoned until the soil had settled further. Some plowing was done on lighter soil in bulk fields.

Fall grain and grass made a slow growth over the week. Some spots of crested wheatgrass in plots apparently have killed out. Alfalfa made very little growth, even where it apparently is alive. Killing of alfalfa

during the winter was quite general over this section on both irrigated and dry land.

Mormon crickets are hatching thick over wide areas, some only a mile or so from the station. Dusting operations by the county, using W.P.A. labor, is expected to start the first of next week.

Maximum temperature, 72°; minimum 27°; precipitation, 0.33 inch.

MANDAN:

Agronomy - The past week has been disagreeable for field work because of high winds and raw cold days. A very high wind blew all day Monday, and the air was filled with dust. Winds of lesser intensity blew on other days, and a high wind prevails at present.

Wheat was seeded on the 19th. The average date of seeding is the 18th. Oats was seeded on the 20th, the average date. Some extra cultivation has been done on unplowed plots to avoid blowing. The south field has been prepared and is again being seeded to oats as it was in 1936. Under present conditions grass seeding would be hazardous. It seems desirable and necessary to first establish a cover.

Crested wheatgrass came through the 1936 drought and heat in much better condition than was expected. Some of the larger fields show spots, that were badly exposed, that are practically dead. The rest of the fields would make fair pasture at present. The experimental plantings are all in good condition. The old planting which is starting its 23rd year is in good condition. The 1915 plantings of bromegrass in rows appear to be entirely dead. The drilled plots were dead in 1934.

Vegetation is starting growth on the prairie. The earliest species to start was Carex filifolia. It is now starting to head out. Stipa comata has also started growth. Blue grama grass has started its new growth at about as early a date as ever noted in this area. After the severe drought of 1934 it was nearly a month late in starting its annual growth. Sods of grama grass taken into the greenhouse at the end of March soon started a good growth. Buffalo grass has a new growth started, which is also earlier than normal for this species.

The indications at present point to a heavy weed growth over the prairie, much as in 1935.

The maximum wind velocity for 24 hours was 15.6 on the 19th, and from 1 to 3 p.m. it averaged 26.5 miles per hour.

Maximum temperature, 73°; minimum, 32°; precipitation, 0.04 inch.

Horticulture - Planting of fruit trees and nursery stock has been in progress throughout the week. As was expected, many trees were dead and a lot of replacing has had to be done. The orchards are being cultivated to check soil blowing. Trees have been tagged to ship to fruit cooperators.

Arboriculture - The lining out of conifer nursery stock has been in progress all the week. Seedlings of some species are beginning to emerge, but the surface soil is generally dry and much of the seed will not germinate until moisture is received.

ARCHER:

During the first half of the week the weather was mild and suitable for field work. During the last two days snow prevented further tillage. One more day's work will be required to finish the duckfooting of the rotation plots. After this is accomplished, the plots will be ready for seeding.

All winter wheat plots have been cultivated and will be reseeded to spring wheat. This is true of all winter wheat seedings at the station. A few farmers report good winter wheat stands where seeded in stubble land. Winter rye is doing well. Grass lands are furnishing some new pasture. Farming operations in this section are in full swing.

Evelyn Roberts and Edith Raleigh of the Resettlement Administration visited the station to study dry-land gardening.

Maximum temperature, 72°; minimum, 24°; precipitation 0.16 inch.

NORTH PLATTE:

High winds continued during the week, and at times dust filled the air until visibility was reduced to a quarter of a mile. Light rain began falling on the morning of the 23rd and soon turned to snow. A heavy snow fell all day and 0.81 inch of water was recorded.

All the corn plots were duckfooted and packed to check blowing. Several isolated blocks of alfalfa were transplanted for T. M. Tysdal, associate agronomist, in alfalfa investigations at Lincoln. The spring small grain has emerged and is making good growth.

M. L. Baker and O. J. Webster attended the feeders day program at the Hays station on the 24th. They reported that the winter wheat looks good in north central Kansas but moisture is needed.

Maximum temperature, 81°; minimum, 32°; precipitation 0.83 inch.

AKRON:

Precipitation reported falling last Saturday amounted to 0.11 inch. This was followed by clear and rather windy weather until Thursday when another storm period netted 0.12 inch.

Rotation spring seeded grains have emerged to satisfactory stands on all soil preparations. Cutworms which caused so much early spring damage to these crops last year do not appear to be present in the soil in damaging numbers this spring. Winter wheat continued to make nice growth progress.

Field work consisted of plowing the small grain stubble infested with volunteer grain for fallow for next year's cereal variety experiments. Roadways were duckfoot cultivated, and the duckfoot cultivator was used to correct surface soil condition on several fallow and bare stubble plots and strips about the station.

A trip across country to Ovid Wednesday revealed lots of winter wheat in promising condition, and a large acreage seeded to spring crops. Some sodland was being broken out and considerable go-back land was being prepared for crop this year.

The first date seeding of corn was made on the 20th. Flowering buds on the fruit trees are swollen almost to the bursting point. Leaf buds of the deciduous trees and shrubs are also greatly swollen. Russian apricot bloomed during the week.

Maximum temperature, 78°; minimum, 23°; precipitation, 0.23 inch.

COLBY:

This has been a bad week for crops, very windy with serious soil blowing on Monday, Thursday, and today. The fore part of the week was warm, and the latter part was cold with temperatures below freezing the last two days. There was a light shower on Monday and about 2 inches of snow preceded by rain on Friday.

All crops have made considerable growth during the week. Some of this growth has been cut off by the dust storms, and, in the case of the spring grains, much of it has been nipped by the frosts. None

of the winter wheat or spring grains on the station have been blown out, but a few of the plots have blown some. Most of the winter wheat plots are looking much more promising than last week.

Maximum temperature, 91°; minimum, 27°; precipitation, 0.39 inch; snow, 2 inches.

HAYS:

Dry weather continues except for a trace of moisture Friday. Heavy south wind Thursday with a high temperature, followed by heavy wind Friday and today is checking the rapid growth of winter wheat which wilted Wednesday and badly Thursday. The wheat is not believed to be seriously injured. The check in growth probably is to its advantage, in that a reduced vegetative growth will have a better chance on the limited amount of moisture in the soil. The easily available supply of moisture in land cropped last year has already been consumed by the wheat.

Rye is suffering very much for want of moisture.

Maximum temperature, 97°; minimum 34°; precipitation, 0.02 inch. Light frost this morning, April 24.

GARDEN CITY:

Five days out of the seven have been dusty, but none were severe. On Friday, 0.07 inch of moisture was received, which quited the dust for that day, but Saturday was again dusty.

The wheat on the station is in fair condition, especially that which is on fallow. Considerable of the wheat in the county has blown so badly, it is beyond recovery, but there are areas which are in very good condition.

Field work consisted of diking the milo plot, and planting shrubs.

TUCUMCARI:

Hail totaling 0.52 inch early in the week knocked many leaves and blooms from trees but did little actual damage. No hail was received in the wheat growing section. Thirty miles northwest, at Conchas dam, about 1 inch of preciptation was received, some stones were as large as hen eggs, and nearly every auto top and composition covered roof in the town was riddled. Precipitation totaling 2.25 inches since the first of the year is only slightly below the 32-year average for this period.

Wind velocity has been high, but no local blowing occurred the past week, as nearly all fields have been worked. Blue dust from the north, high in the air and accompanied by very little wind, occurred on two days. Temperatures varied greatly, with a close escape from frost last night.

Ranges, fruit and shade trees, and vegetation of all kinds look better than at this time of year since, perhaps, 1931. Below the first or second foot there is still a shortage of moisture, but at present all living plants are showing the benefits of recent precipitation.

Field cultivation, watering of trees and shrubs, continued listing, and preparation of seed grains for planting comprised the work of the week.

Maximum temperature, 84°; minimum, 33°; precipitation, 0.59 inch.

DALHART:

Precipitation for the week was 1.02 inches in three rains. This did not bring relief from the soil blowing. The soil movement was fully as severe on the days following the rains as at any time previous. Sand shifts so easily that it was felt to be inadvisable to attempt field work because of the danger of sand accumulations. Work during the week has consisted in making replacement in the conifer planting. There still remains about a day's work for making replacements.

Sand movement has kept down weed growth. Pastures are likewise punished except on the larger ranges. Cherry trees bloomed during the week. Some of the earlier grape vines have had their first leaf buds scorched by the wind.

Maximum temperature, 84°; minimum, 33°; precipitation, 1.02 inches.

BIG SPRING:

Warm weather during the past few days has started nearly all forms of vegetation. The mesquites and China trees, which are supposed to be signs that the last freeze has occurred, are now breaking into leaf. Heavy, dust-laden winds have occurred during the week, but have not caused any damage from soil movement.

The first cotton date of three varieties was planted April 15 and is now emerging, but it will not last long if soil starts moving down the row. Winter wheat plots are beginning to show signs of the lack of moisture. The M.C.A plot is burning badly, and the others are showing signs in spots.

Station work has consisted of knifing lister beds, hoeing out tree rows, and cleaning seed.

Maximum temperature, 95°; minimum, 36°; precipitation, none.

LAWTON:

One of the most important and without question one of the most cheerful recent events in this vicinity was 2.35 inches of rain that fell during a 16-hour period on the 20th. Runoff was not heavy at any time, and the soil was well soaked.

Small grain prospects continue to be unusually good, and vegetation of all kinds is coming into a lush, vigorous growth. A good many varieties of wheat will be in the first heading stage within 3 or 4 days. Most of the winter barley is pretty fully headed now. The first pustules of leaf rust on wheat were found April 22. As yet, the infection is very light and development is slow. Pretty good stands of grain sorghums, planted in the variety test, April 16, were evident on the 24th. Corn replanted on the rotation plots April 12 emerged rather slowly and unevenly but finally made a good stand.

A severe dust storm was recorded in the afternoon of the 23rd. Visibility for about one hour, beginning at 6:00 P. M., was reduced to less than 40 rods, and the wind velocity at that time was 25 miles per hour.

Maximum and minimum temperatures during the week ranged from 67° to 83° and 39° to 58°, respectively.

WOODWARD:

A rain of 0.44 inch temporarily relieved the wheat. Cool weather following this rain also afforded relief. Still, on many fields over the country there is very evident suffering for lack of moisture. On the station plots are becoming spotted. At present wheat on fallow still has a remarkably fresh, lush, vigorous appearance.

Many farmers are stopping at the station asking relative to reliable sources of sorghum seed. We have lists of the Kansas and Oklahoma crop improvement associations, but they offer little. Farmers are reluctantly purchasing from local elevators which have shipped in seed of unknown quality, purity, and variety.

Spirea Vanhoutte is just beginning to come into bloom; redbud is fading, and another variety of iris comes into bloom almost every day. Other plants in bloom are honeysuckle, daffodils, flax, Japan quince, lilacs, and a great many wild flowers. A new plant to bloom for the first time this season is Xanthoceras. The bloom is very abundant and rather showy, the blossoms being white with red centers. While little is known of this, it seems well adapted and it is hoped will prove a valuable asset. It is closely related to the native soapberry and grows to 15 feet. It is badly in need of a common name.

Considerable farming on plots and fields was accomplished during the week. Grass was planted on the Forage project and work was started on Cereal wheat nursery. Other work consisted of planting trees and ornamental perennials and planting tree and shrub seed.

Maximum temperature, 87°; minimum, 37°; Precipitation, 0.44 inch.

JUDITH BASIN:

The week ending April 24th has been very unsettled. Precipitation in the form of snow on 5 days totaled 0.08 inch.

Field work has progressed quite well, considering the weather. Small grains, except flax, have been seeded on the Rotations, and Mr. R. H. Bamberg in charge of cereal work has completed the seeding on the spring nursery and varieties.

Crested wheatgrass has made sufficient growth to permit starting pasture tests on the 21st.

The mean temperature for the week has been normal compared to the April averages, but the wind velocity has averaged 1.8 miles per hour above the month's average. Moisture for seeding is still fair on the better methods of tillage, such as fallow and cornland.

Maximum temperature, 61°; minimum, 21°; precipitation, 0.08 inch.

BELLE FOURCHE:

With the exception of an occasional warm day, the weather was comparatively cold and unfavorable to plant growth. Several showers were received, but they were too light to be of value to crops. Strong winds were of almost daily occurrence, and extremely high winds prevailed April 11, 12, 14, 21, and 24. A shower prevented soil blowing on April 11 and 12, but more or less soil movement took place on April 14, 21, and 24. The frequent strong winds have gradually reduced the soil on many newly seeded fields to a dangerous condition, and the high wind on April 24 caused some fields seeded during the past week to commence blowing.

The surface soil has become quite dry, and very little shallow planted seed will germinate until after rain is received, but fair stands of small grain should be obtained on all cultural treatments, except spring plowing. Fall grain has made abnormally slow progress, owing to the cold weather, and winter wheat has not completely emerged, but winter rye finally came up with good stands on the various plots. Stands of fall seeded grass have materially improved, but emergence is far from complete. Sweetclover is coming up on the stubble plots reseeded before the heavy snow in March.

Work in the field commenced April 12. The various plots were prepared for early spring planting, and spring wheat, oats, barley, peas, flax, alfalfa, and sweetclover were seeded. Field work also included listing, and plowing furrows with a corrugator to check soil blowing.

Maximum temperature, 68°; minimum, 23°; precipitation, 0.16 inch.

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